

The Role of Forestry in Climate Action for California

California Dept. of Forestry
and Fire Protection




Importance of Forests in Climate Action

- ◆ Globally forests contribute 17% of GHG emissions¹
- ◆ In the US, forest ecosystems are a net carbon sink
- ◆ California forestry opportunities to reduce GHG gases and mitigate climate change:
 - ◆ Sequester CO₂ from other emission sources in forest ecosystem
 - ◆ Reduce emissions from wildfires and pests
 - ◆ Increase use of woody biomass as alternative to fossil fuel
 - ◆ Substitute wood products for other materials that require more energy to produce

1 IPCC 4th Report

2 The First State of the Carbon Cycle Report, Birdsey et al.,

Five Forestry Strategies

- ◆ Reforestation or Afforestation
 - ◆ Forest and woodland conservation
 - ◆ Forest management
 - ◆ Urban forestry
 - ◆ Fuels management
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- A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, partially overlapping the background.

California's Forestry Climate Actions

- ◆ Governor's Executive Order S-03-05 to reduce GHG emissions to 1990 levels by 2020
- ◆ CA Climate Warming Solutions Act (AB 32) to implement GHG reductions
- ◆ Adopted Forestry Protocols for conservation, forest management and reforestation projects
- ◆ Forestry Considerations for implementing AB 32:
 - State and federal agencies improving methods for tracking forestry GHG emissions and sinks
 - Five forestry mitigation strategies for ensuring forestry target
 - More evaluation of mitigation options, e.g. fuels management

Need for Adaptation

- ◆ Potential threats to California forests from changing temperatures and precipitation regimes
 - Increased fires and vegetation conversions
 - Insect and diseases
 - Changes in cone crops, regeneration and survival
- ◆ Management and planning challenges*
 - Managing for resistant and resilient ecosystems
 - Increased focus on ecosystem processes and services
 - Uncertainty and adaptive management
- ◆ Hard policy questions
 - Conflicts and tradeoffs among land uses and resources
 - Managing for new and unknown future

* Adapted from presentation by Dr. Connie Millar, USFS

Challenge and Opportunity

- ◆ Climate change presents a unique opportunity but also a serious challenge to forest management and protection
 - ◆ We must seize opportunities in the short term to manage forests *to reduce GHG emissions so that they contribute to climate change mitigation.*
 - ◆ *At the same, we must maintain forest health in the face of climate change, so that our forests do not lose their capacity for mitigation.*
- ◆ California is ready to work with public sectors in our state, nationwide and globally to achieve these ends.

California Forestry and Climate Change

- ◆ California has about 55 billion cu ft of growing stock in timberlands
- ◆ US Forest Service data showed timberland stocks increasing 2% per year
- ◆ Potential to increase GHG benefits (-8 million metric tons per year by 2020)